REMARKS

Claims 1-44 are pending in the present application.

Reconsideration on the merits is respectfully requested.

The claims are believed to be allowable for the reasons set forth herein. Notice thereof is respectfully requested.

Claim Rejections - 35 USC § 102

Claims 1, 11, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kano (U.S. Pat. No. 5,012,107).

Kano is cited as disclosing a stimulable phosphor screen or panel comprising a phosphor layer and a support. Applicants agree.

Kano is also cited as disclosing an intermediate layer of an X-ray absorbing foil or light shielding layer and a stimulated light reflecting foil or light scattering foil. Applicants respectfully submit that this characterization is incorrect.

The layers of Kano are described relative to the stimulating excitation and stimulated light. The stimulating excitation is applied after high energy radiation to release the stored, or stimulated, radiation. Therefore, in contradication to the position of the Office, when Kano refers to "stimulating

excitation" it is a light with a wavelength of 500 nm or longer (col. 3, lines 51-52). The light-shielding layer is therefore specifically defined as capable of preventing transmission of the stimulating light (i.e. 500 nm or longer) by absorbing or reflecting the stimulating light. This is only relevant after an image has been previously stored by exposure to imagewise x-radiation.

In contrast, the present invention describes a simulated light reflecting foil closest to the phosphor and an x-ray absorbing foil between the support and stimulated light reflecting layer.

The Office has equated the x-ray irradiation, which image-wise exposes the phosphor to store an image therein, with the stimulating light which is used in a subsequent step to release the stored image. Applicants respectfully submit that these forms of radiation are distinct and should not be considered equivalent.

The rejection under 35 U.S.C. 102(b) is improper due to the failure of Kano to recite, at least, an x-ray absorbing foil or layer between a stimulated light reflecting foil and the support. For this reason the rejection of claim 1 under 35 U.S.C. 102(b) is improper and withdrawal is respectfully requested.

Claims 11, 13 and 15 depend from claim 1 and are patentable for, at least, the same reasons as claim 1.

The rejection of claims 1, 11, 13 and 15 under 35 U.S.C. 102(b) as being anticipated by Kano is traversed.

Claim Rejections - 35 USC § 103

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Miura (U.S. Publ. No. 2003/0021387).

Kano is cited as disclosing the limitations set forth in claim 1 as discussed supra. The prior comments are equally applicable herein. The Office admits that Kano fails to recite a lead compound in a binder. Miura is cited as disclosing an x-ray absorbing material made of leaded glass wherein the x-ray absorbing material is embedded in a glass matrix.

Miura is specific to a flat panel image device. One aspect of this device is the inherent x-radiation generated which must be filtered. One of skill in the art would have no motivation for combining a flat panel image device and an x-radiation storage device except for the motivation provided by the instant specification.

As stated supra, Kano addresses the results and structure relative to the excition of the phosphor to release the stored

image as radiation emitted therefrom. There is minimal discussion regarding the process of forming that image except as necessary to define the environment within which the invention is utilized and the necessary steps required to store an image so that the invention can be demonstrated. One of skill in the art would have no basis from Kano for considering improvements in the resolution of the image storage step. The only concern of Kano is accurately retrieving that previously stored image. Applicants respectfully submit that the absence of any discussion related to steps which are a prerequisite for demonstrating the invention prohibits one from arbitrarily reading into Kano any desire to improve those prerequisite steps. Any motivation for improving those prerequisite steps can only be realized after reviewing the instant specification. It is well established in patent law that motivation must be provided in the cited art not the pending specification.

Referring specifically to claims 2 and 5 one of skill in the art would have no motivation for contemplating improvements in the image capture capabilities based on Kano and no motivation for incorporating lead in any form or fashion. Miura provides no guidance since the entire purpose is to prohibit x-radiation generated inside a display from escaping. This teaching provides no guidance for how the layer could also be

used in improving an image capture device. The combination of Kano and Miura can only be a hindsight reconstruction based on a search to locate a teaching of lead for incorporation into Kano based on hindsight to reconstruct the teachings of the instant specification motivated only by the teachings within the instant specification. The rejection is therefore improper and withdrawal is respectfully requested.

The rejection of claims 2 and 5 are based on a hindsight reconstruction motivated only by the present invention and is therefore improper. Claims 3 and 4 ultimately depend from claim 2 and are therefore patentable for, at least, the same reasons as claim 2.

The rejection of claims 2-5 under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Miura is traversed. Withdrawal is respectfully requested.

Claims 6, 12, 14, 16, 18, 20, 22, 24, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Isoda (U.S. Pat. No. 6,387,297).

Kano has been discussed supra and all comments are relavent herein. In summary, Kano fails to describe, discuss, or lead one of skill in the art towards an x-ray absorbing foil or layer. The Office confuses x-ray radiation used to form the

stored image with stimulating light used to release the stored image.

Isoda is cited as disclosing a light reflecting layer made of aluminum. Even if one did combine Isoda and Kano they would still lack the x-ray absorbing layer as set forth in claim 1 and claim 6 by dependence therefrom.

Claims 12, 14, 16, 18, 20, 22, 24, 26 and 28 are patentable over Kano in view of Isoda for, at least, the same reasons as claim 6. The combination of references fails to lead one of skill in the art to realize the advantages of the combination of layers as set forth in claim 1 and the rejected claims by dependence therefrom.

The rejection of claims 6, 12, 14, 16, 18, 20, 22, 24, 26 and 28 under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Isoda is traversed.

Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Miura further in view of Isoda.

Kano in view of Miura is discussed supra and all comments presented therein are applicable here as well. In summary, Miura is specific to a flat panel image display device wherein it is desirable to capture, by absorption, the x-radiation

inherently generated within the panel. There is no indication, or suggestion of how, or why, one of skill in the art would be motivated to incorporate the shielding layer of Miura into a storage phosphor screen. The only motivation for such a combination is found in the present application which is improperly relied on to reach a conclusion that the claims are unpatentable.

Isoda fails to provide the motivation which is otherwise lacking in Kano and Miura for the reasons set forth supra.

The rejection of claims 7-10 under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Miura further in view of Isoda is traversed and notice thereof is respectfully solicited.

Claims 17, 19, 21, 23, 25 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano.

Kano has been addressed previously with regards to the rejection of claim 1 under 35 U.S.C. 102(b). As stated in response to the previous rejection Kano fails to recite, or suggest, any reason for altering the manner in which the x-ray absorption is recorded. It is only after the image is stored by exposure to x-radiation that the teachings of Kano become relevant. As stated previously, one of skill in the art of Kano would have neither motivation, nor teachings, regarding

improvements in the ability to capture x-radiation with regards to efficiency or resolution. Even assuming, based on hindsight, that one did determine the necessity for improving the x-radiation image capture there is no teaching in Kano capable of leading one to understand how to quantify the x-radiation capture parameters and therefore no way to monitor improvement.

The rejection of claims 17, 19, 21, 23, 25 and 27 under 35 U.S.C. 103(a) as being unpatentable over Kano is traversed.

Claims 29, 31, 33, 35, 37, 39, 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Homme (U.S. Pat. Publ. No. 2004/0000644).

Kano has been discussed previously and all comments are relevant herein. As pointed out by the Office, Kano fails to recite that the phosphor is a binderless phosphor having needle shaped crystals. Homme is cited as disclosing a radiation detection panel with a stimulable phosphor that has needle shaped crystals.

Homme is specific to a scintillator panel which primarily absorbs imagewise x-radiation, converts the x-radiation to longer wavelength light and then captures the longer radiation light for conversion to an electrical current. The structure, technique and procedure are different from Kano wherein a

phosphor stores the image for later release and capture. The problem to be solved by Homme is corrosion between the scintillator and a metal film. Homme provides no guidance for how one would proceed to improve the x-radiation capture of a stimulable storage phosphor screen. If one did consider Homme they would be directed from considering radiation absorbing layers between the phosphor and scintillator since they would block the radiation from reaching the scintillator. Absent hindsight, there is no motivation for extracting the phosphor from Homme and placing it in a stimulable storage phosphor screen.

The claimed invention specifically recites layers which absorb x-radiation and layers which reflect the stimulated light. There is no teaching in Kano regarding such structure nor is there any teaching in Homme which could be combined with Kano to provide such structure. The rejection is therefore based on a combination of art which still fails to recite the claimed invention. The rejection is therefore improper and withdrawal is respectfully requested.

The rejection of claims 29, 31, 33, 35, 37, 39, 41 and 43 under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Homme is traversed.

Claims 30, 32, 34, 36, 38, 40, 42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Homme.

The rejection of claims 30, 32, 34, 36, 38, 40, 42 and 44 appears to be substantially identical to that stated above for claims 31, 33, 35, 37, 39, 41 and 43. Applicant respectfully submits that the comments submitted above are equally applicable herein and that the rejection is improper for the same reasons as for claims 31, 33, 35, 37, 39, 41 and 43.

The rejection of 30, 32, 34, 36, 38, 40, 42 and 44 under 35 U.S.C. 103(a) as being unpatentable over Kano in view of Homme is traversed for the same reasons as the rejection of claims 31, 33, 35, 37, 39, 41 and 43.

CONCLUSIONS

Claims 1-44 are pending in the present application. All claims are believed to be in condition for allowance. Notice thereof is respectfully requested.

Respectfully submitted,

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